

Title (en)  
WOUND CORE AND WOUND CORE MANUFACTURING METHOD

Title (de)  
GEWICKELTER KERN UND VERFAHREN ZUR HERSTELLUNG EINES GEWICKELTEN KERNS

Title (fr)  
NOYAU ENROULÉ ET PROCÉDÉ DE FABRICATION DE NOYAU ENROULÉ

Publication  
**EP 4343009 A1 20240327 (EN)**

Application  
**EP 22849031 A 20220608**

Priority  
• JP 2021124863 A 20210730  
• JP 2022023038 W 20220608

Abstract (en)  
There is provided a wound core with low transformer iron loss and good magnetic characteristics without using two or more types of materials with different magnetic characteristics. A wound core according to the present invention is composed of a grain-oriented electrical steel sheet as a material and has a flat surface portion, a corner portion adjacent to the flat surface portion, a lap portion in the flat surface portion, and a bent portion in the corner portion, and the ratio of the length of the outer circumference to the length of the inner circumference (the length of the outer circumference/the length of the inner circumference) is 1.80 or less when viewed from the side, and the grain-oriented electrical steel sheet has a magnetic flux density B8 in the range of 1.84 T to 1.91 T at a magnetic field strength H of 800 Aim and has a specified iron loss deterioration rate of 1.50 or less under compressive stress.

IPC 8 full level  
**C21D 8/12** (2006.01); **C22C 38/00** (2006.01); **C22C 38/60** (2006.01); **H01F 27/245** (2006.01); **H01F 41/02** (2006.01)

CPC (source: EP KR)  
**C21D 6/008** (2013.01 - EP); **C21D 8/12** (2013.01 - KR); **C21D 8/1294** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C22C 38/60** (2013.01 - KR);  
**H01F 3/02** (2013.01 - EP); **H01F 27/245** (2013.01 - KR); **H01F 41/0233** (2013.01 - EP KR); **C21D 2201/05** (2013.01 - EP);  
**C22C 38/004** (2013.01 - EP); **C22C 38/008** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/20** (2013.01 - EP);  
**C22C 38/22** (2013.01 - EP); **C22C 38/34** (2013.01 - EP); **C22C 38/42** (2013.01 - EP); **C22C 38/44** (2013.01 - EP); **C22C 38/60** (2013.01 - EP);  
**Y02P 10/20** (2015.11 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4343009 A1 20240327**; CA 3219693 A1 20230202; CN 117678038 A 20240308; JP 7151946 B1 20221012; JP WO2023007952 A1 20230202;  
KR 20240021276 A 20240216

DOCDB simple family (application)  
**EP 22849031 A 20220608**; CA 3219693 A 20220608; CN 202280050579 A 20220608; JP 2022544244 A 20220608;  
KR 20247001269 A 20220608